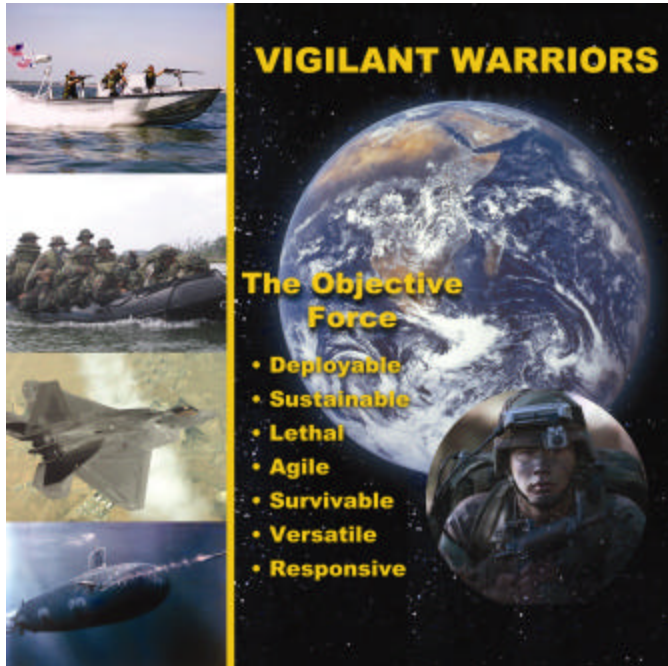


ARMY Transformation Wargame 2002

22-26 April 2002, U.S. Army War College, Carlisle Barracks, PA



VIGILANT WARRIORS

The Objective Force

- Deployable
- Sustainable
- Lethal
- Agile
- Survivable
- Versatile
- Responsive

*Soldiers on point for the Nation . . . Persuasive in Peace . . .
... Invincible in War*



Key Wargame 2002 Participants

Interagency

National Security Council Staff
US Department of State
US Department of Defense
US Department of Transportation

Intelligence Agencies

Central Intelligence Agency
Defense Intelligence Agency
National Reconnaissance Office
National Air Intelligence Center
National Ground Intelligence Center
Office of Naval Intelligence
US Army Intelligence and Security
Command

Combatant Commands

US Joint Forces Command
US Space Command
US Special Operations Command
US Transportation Command

Services

Joint Staff
Department of the Army
Office of the Chief of Army Reserve
Department of the Navy
Headquarters Marine Corps
III Marine Expeditionary Force
Department of the Air Force
Headquarters Coast Guard
National Guard Bureau

Army Major Commands

Training and Doctrine Command
Army Materiel Command
Space and Missile Defense Command
Special Operations Command
Medical Department

Army Training Centers

Combined Arms Center
Combined Arms Support Command

Other Organizations and Agencies

Defense Advanced Research Projects
Agency
Army Science Board
Army Research Laboratory
Brown University
Lexington Institute
Wall Street Journal
RAND
Center for Army Analysis

International Participants

Australian Army
British Army
Canadian Defense Force
German Army
French Army
Israeli Defense Force
Italian Army
Spanish Army
Greek Army

Army Schools

Air Defense
Artillery
Adjutant General
Armor
Aviation
Chaplain
Chemical
Engineer
Field Artillery
Finance
Infantry
Intelligence
Judge Advocate General
Military Police
Ordnance
Quartermaster
Signal
Transportation
Command and General Staff College
Army War College
Soldier Support Institute

PREFACE

The United States Army continues development of its transformation strategy to field a future Objective Force that is strategically responsive and dominant across the full spectrum of military operations. As an integral part of this transformation effort, The Army Transformation Wargame capitalizes on several years of study, wargaming, and analysis of concepts and capabilities beyond the year 2010.

In 2000, the first Army Transformation Wargame demonstrated The Army's Objective Force as a highly deployable, general-purpose force that provided enhanced combat power to meet future strategic and operational challenges. In 2001, the second Army Transformation Wargame, "Vigilant Warriors '01," examined emerging Objective Force concepts and capabilities across the full-spectrum of military operations.

The Army recently conducted its third Transformation Wargame, "Vigilant Warriors '02," at Carlisle Barracks, Pa., from 21-26 April 2002. This event represents the culmination of a year's worth of monthly seminar wargames and Army Transformation efforts aimed at maturing warfighting concepts for The Army of the future. Vigilant Warriors '02 explored strategic capabilities of the Objective Force as a member of joint and coalition teams against a backdrop of multiple global crises.

This report provides a preview of the findings, issues, and insights derived during the wargame. It also provides a way ahead for the further study and analysis of selected critical topics and issues. A detailed analysis report focusing on what was learned in this wargame about the Objective Force as a member of joint and coalition teams in the 21st century will be published in the coming weeks.

Vigilant Warriors '02 and Army Transformation

Vigilant Warriors '02, like The Army's overall transformation, was about change. It focused on developing strategic, operational, and tactical capabilities to meet evolving national security challenges of the 21st century. The wargame's general thesis was "The Army must transform to the Objective Force while maintaining a required state of readiness during transformation." The intent of the wargame was:

- Conduct an informed discussion of future warfare, considering the full-spectrum of potential future conflicts.
- Consider emerging technology-based capabilities available on international markets and effects of employment by adversaries.
- Portray the impact of Objective Force capabilities on future warfare.

Vigilant Warriors '02 resonated the Army's basic requirement to transform to the Objective Force. Its results confirmed the indispensability

of land power as a major component of national power.

The wargame confirmed the strategic importance of land forces in their ability to fight and win the Nation's wars, as a part of a joint force, and provide the President, Secretary of Defense, and combatant commanders with a full-range of responsive options for influencing the evolving national security environment – at home and abroad.

In essence, the wargame served to simulate the underlying drivers of transformation (Figure 1). The evolving strategic and operational environment of the 21st century is having a profound impact on our ability to defend the nation and our national way of life. Many of the aspects of the 2020 world projected in the wargame are experienced by US forces today. An underlying premise for today and for the future is that:

- US will continue to have global interests and will engage with a variety of regional actors. The joint force must be prepared to

Requirement to Transform is Based Upon . . .



- Evolving Security Challenges of the 21st Century
- Dynamic Operating Environment
- National Security Strategy and National Military Strategy
- Pace and Proliferation of Technology

The Army expands the Nation's available tools to rapidly achieve and sustain decision.

Figure 1. Requirement to Transform

“win” across the full range of military operations in any part of the world, to operate with multinational forces, and to coordinate military operations, as necessary, with government agencies and international organizations.

- Potential adversaries will have access to the global commercial industrial base and much of the same technology as the US military. We will not necessarily sustain a technological advantage over our adversaries in all areas. Therefore, our

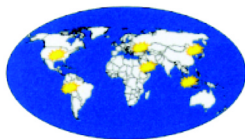
advantage must come from improvements to doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLP-F) that enable us to take advantage of technology to achieve superior warfighting effectiveness.

- Finally, as our capabilities evolve, we should expect potential adversaries to adapt and make use of asymmetric approaches that avoid our strengths and exploit potential vulnerabilities.

Objectives

The Chief of Staff Army and the Commanding General, US Army Training and Doctrine Command (TRADOC), directed the development of a wargame design and scenario of global strategic proportion. Basic going-in questions and assumptions centered on the US having to respond to a series of near-simultaneous crises ranging across the spectrum of operations and transcending existing combatant command boundaries. The implications included the basic nature of 21st

century conflict on a global scale, force projection requirements, homeland security challenges, and the strategic, operational, and tactical capabilities of the Objective Force as a member of the joint and combined team. The seven objectives listed are derived from the guidance of the Army’s senior leadership (Figure 2). They are constructed to inform the senior leadership on key issues relating to future conflict, and they serve as the foundation for follow-on study and analysis.



To understand the dynamics of 21st century conflict . . .

1. Inform senior leaders of future conflict in the context of multiple crises; demonstrate the strategic contribution of the objective force.
2. Illustrate the need to maintain a strategically responsive full-spectrum joint force.
3. Recommend force projection and sustainment concepts and capabilities suitable for a multiple crises global environment.
4. Refine strategic theater, operational, and tactical concepts and capabilities in a joint and combined context.
5. Examine command and control, leadership, and campaign planning challenges in the context of a multiple crises global environment.
6. Explore Army capabilities, roles, missions, and organization for homeland security.
7. Examine the role of the Army strategic reserve and the mobilization base.

Wargame objectives were the basis for research issue questions and are the foundation for future analysis.

Figure 2. Wargame Objectives

Wargame Overview

Vigilant Warriors '02 was conducted at the US Army War College, Carlisle Barracks, Pa., from 21-26 April 2002.

The wargame setting ran from 1919 until 2021. The scenario included multiple competing global crises. US and coalition "Blue" forces responded to a series of crises occurring in the Caspian region, Northeast Asia, East Asian littoral, the Balkans and Latin America, while simultaneously dealing with threats to the US homeland. "Red" forces consisted of several linked adversaries, including recognized nation-states, transnational criminal cartels, and international terrorist organizations. The key findings raised during the wargame were

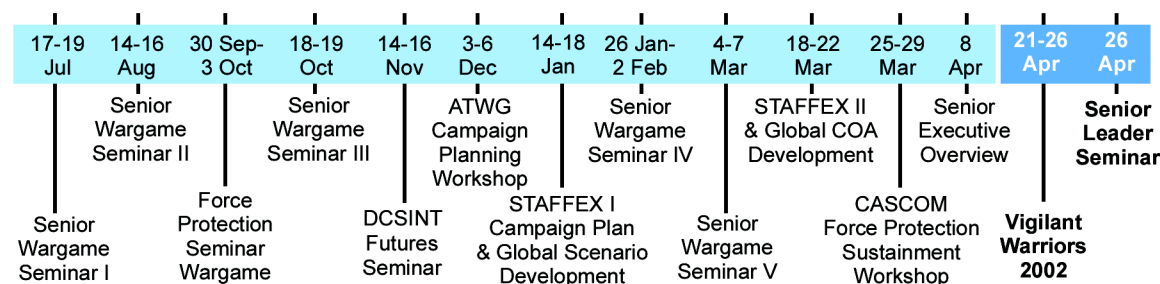
presented to the Army Chief of Staff, the Commanding General, TRADOC, and other senior Army and joint leaders at a senior leaders' seminar on 26 April 2002.

Vigilant Warriors '02 included over 600 participants and visitors. Players represented a cross-section of individuals who held or now hold leadership positions in academia, industry, or the US Government. Also included were functional representatives from the US military services, the interagency community, and allied nations who have a specific interest in Army Transformation and the Objective Force.

Vigilant Warriors '02 Events

Vigilant Warriors '02 is a capstone event in a series of Army Transformation Study, Wargaming, and Analysis efforts (Figure 3). The following summarizes a year's worth of

workshops, seminars, staff exercises, and seminar wargames leading up to Vigilant Warriors '02.



TRADOC Seminar Wargame Series (SWG I-V). From July 2001 to March 2002, five seminar wargames were conducted at Fort Monroe, Va., to assist Headquarters, TRADOC, and The Army in developing Objective Force operational concepts.

TRADOC Force Protection Seminar Wargame. In September 2001, TRADOC sponsored a Force Protection Seminar Wargame at Fort Monroe to determine solutions for mid- and long-term force protection against terrorist threats on TRADOC and other Army installations. Participants examined force protection capabilities in the context of attacks on military installations. The product was the

development of a force protection operations and organizational plan and handbook.

TRADOC DCSINT Futures Seminar. The Futures Seminar brought together a wide range of experts from government, academia, and the scientific community to study the operational environment and technologies the Objective Force can expect to encounter in the future. Results provided the context for military operations in Vigilant Warriors '02.

TRADOC Staff Exercises (STAFFEX I and II). Conducted at Fort Eustis, Va., STAFFEX I and II included Caspian

and Sumesian campaign planning and global scenario development to serve as the Vigilant Warriors '02 start point for each crisis.

Force Projection and Sustainment Workshop. The Combined Arms Support Command workshop identified logistics requirements to support deployment and sustainment demands for the campaign plans developed at STAFFEX II.

Senior Executive Overview. Held in April at the Booz Allen Hamilton Conference Center at McLean, Va., this event provided a Vigilant Warriors '02 overview for senior participants.

Figure 3. Army Transformation Wargame Events

Wargame Design

The Army Transformation Wargame '02 was designed as a seminar wargame around a global strategic team (GST) representing the combatant commanders, and national and coalition leadership. The GST evaluated a series of crises and determined priority of effort based on national security and military strategies (Figure 4). Team members allocated forces, capabilities, and resources in response to crisis demands. The GST consisted of senior military officers from all the services, former ambassadors, and interagency representatives.

Player teams represented other world crises. These included a homeland security investigative panel, two Red vs. Blue teams wargaming a major combat operation in the Caspian, and a stability operation in the fictitious island nation of Sumesia. Other stability operations occurred in Latin America and the Balkans, and the possibility existed for a second major combat operation

occurring on the Korean peninsula. The wargame accounted for on-going security cooperation operations.

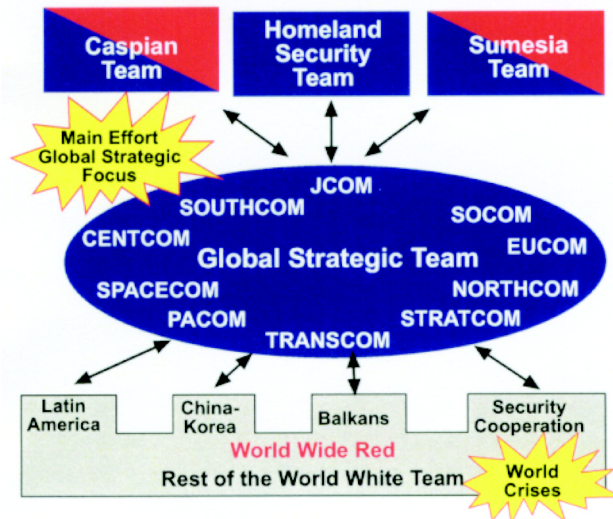


Figure 4. Game Design

Vigilant Warriors '02 Scenario

Figure 5 depicts the global nature of the wargame scenario – a series of near-simultaneous crises potentially threatening the

flow of energy resources, international commerce, and the survivability of the US way of life.

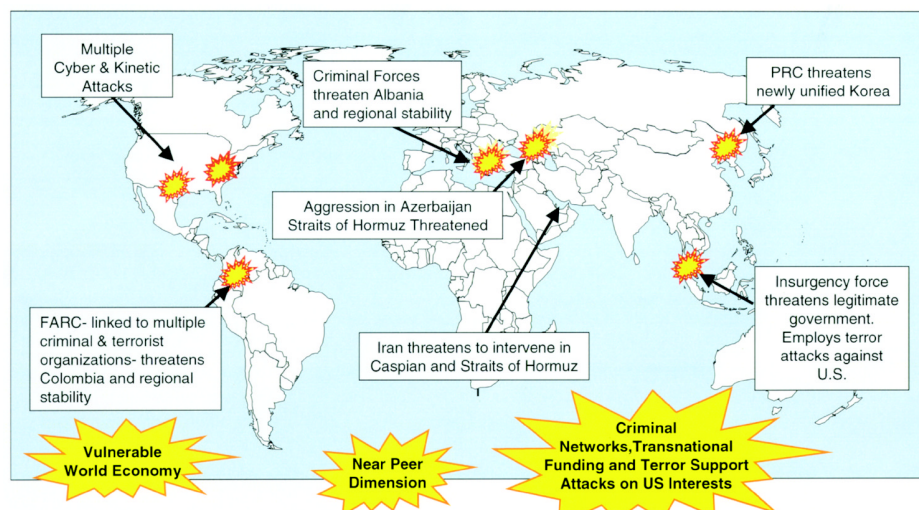


Figure 5. Wargame Strategic Setting (2019-2021)

ARMY Transformation Wargame 2002

A US-led coalition responded to Anfar's (fictitious country in the Caspian region) invasion of Azerbaijan, while US forces in Sumesia (a fictitious state encompassing Indonesia) were participating in a UN-sanctioned peace enforcement operation on the island of Sumatra. US forces remained in a unified Korea as the Chinese threatened to destabilize the region. Other US forces were supporting stability operations and security assistance efforts in the Balkans, Philippines, Afghanistan, Southwest Asia, Australia, Africa, and Latin America. At the same time, the US homeland was experiencing hostile attacks.

Sumesia. By late 2019, elements of the Sumesian military in northern Sumatra defected to the Northern Independence

Movement¹ (NIM), forming a de facto state. The NIM and Sumesia agreed to a zone of separation. A natural disaster in southern Sumatra provided the opportunity for a resurgence of NIM subversive operations in the south. The Sumesian government requested UN-sponsored intervention. With the situation threatening the existence of the Sumesian government, a UN-sanctioned, US-led combined joint task force (CJTF) deployed to the region (Figure 6). US forces were conducting peace enforcement operations, supporting on-going humanitarian assistance efforts, and controlling air and sea lines of communication when an NIM sympathizer detonated a bomb in a Washington, DC subway.

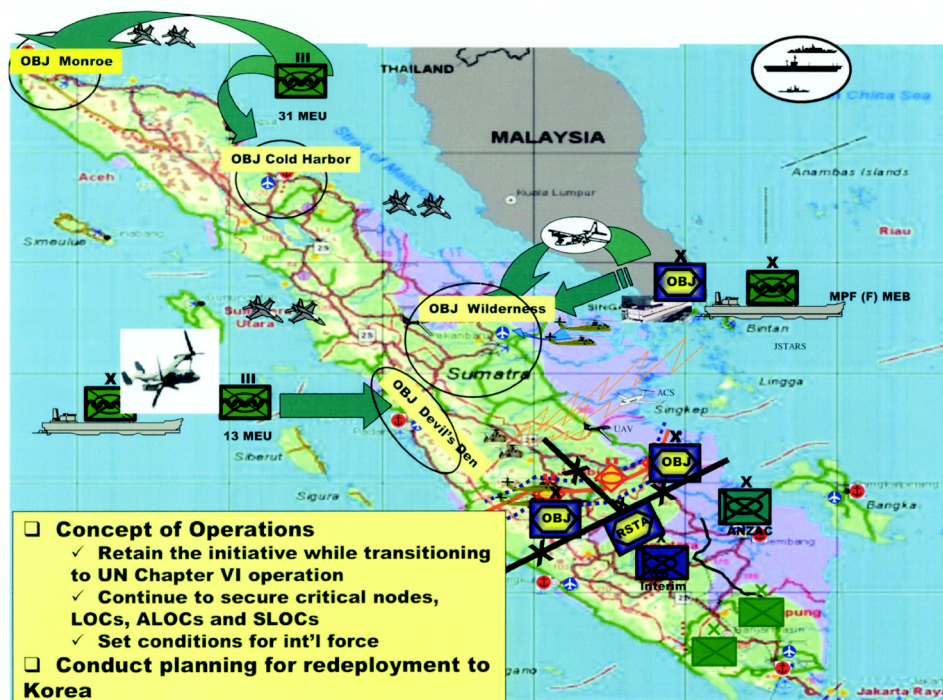


Figure 6. Combined Joint Task Force OPLAN Bravo

¹ Northern Independence Movement is a revolutionary organization headquartered in Northern Sumatra with worldwide economic/criminal ties. They have co-opted other separatist movements in Sumatra.

The NIM attack created a US public outcry for strong military action in Sumesia. On 3 February 2020, a US Marine-led CJTF attacked the NIM. The CJTF consisted of two carrier battle groups², two air expeditionary forces³ (AEF), two Marine expeditionary units⁴ (MEUs), a division air-ground task force⁵ (AGTF), an interim brigade combat team, and a combined Australian/New Zealand brigade. They used limited amounts of advanced sea and airlift capability and ground attacks against multiple NIM battalion and brigade locations throughout northern Sumatra. Assisted by information operations and special forces coalition support teams directing air and naval interdiction, the CJTF rendered NIM conventional forces combat ineffective in a few days. NIM units abandoned their equipment and dispersed into jungle and urban areas to conduct insurgency operations. The CJTF continued efforts to stabilize Sumatra while transitioning to UN peacekeeping operations and deploying forces to Korea.

Caspian. In December 2019, Anfar massed troops on the Azeri border. Iranian forces postured to intervene on Anfar's behalf. The Azeris prepared for defense and asked for US intervention. Russia, Turkey, and Georgia agreed to provide logistical support, basing,

and over-flight rights. On 2 January 2020, two Anfarian operational strategic commands⁶ (OSCs) attacked to seize objectives along the Baku-Tbilisi line of communication. Three OSCs remained in Anfar. Coalition air forces supported the overmatched Azeri forces as they defended their homeland. The US joint response began with ship-to-objective maneuver by a Marine expeditionary brigade⁷ (MEB) against key command and control nodes in Anfar (Figure 7).



Figure 7. Caspian Campaign Decisive Operations

² **Aircraft Carrier Battle Group** organization is mission dependent. Battle groups are created and dissolved "as needed" and differ one to another. Traditionally, aircraft carrier battle groups are comprised of a carrier supported by cruisers, destroyers, attack submarines, helicopters, and a fast combat-support ship.

³ **Air Expeditionary Force** integrates the contributions of the Total Air Force (active, guard, and reserve) into cohesive deployable force packages. Each AEF has about 175 aircraft and each is more formidable than the air forces of most nations. AEF packages are able to respond within 72 hours of any unexpected contingency -- and are trained and tailored to meet a wide range of contingency operations. Two AEFs are on call at all times to respond to contingency operations.

⁴ **Marine Expeditionary Unit** is normally built around a reinforced battalion, a composite aircraft squadron, and by an MEU service-support group with a strength of about 2200 personnel. MEU is employed to fulfill routine forward deployments with fleets in the Mediterranean, the Western Pacific, and periodically, the Atlantic and Indian Oceans. The MEU is deployed on up to four naval amphibious ships. The MEU is unique in that its air and ground combat elements are combined with combat-service support under one commander.

⁵ **Air-Ground Task Force** is formed at the Units-of-Employment (UE) level. AGTFs are highly tailorable for specific missions or contingencies. AGTFs support Units of Action (UA) by ensuring

freedom of action through advanced aviation, long-range precision fires (to shield and isolate), multifunctional sensor/attack, and advanced command, control, communications, computers, intelligence, surveillance, and reconnaissance networking. AGTFs enable UAs to move rapidly from one engagement to the next and maintain a high operational tempo. AGTF fire assets are primarily responsible for the counterfire role to support and protect UA maneuver. AGTFs have the organic capability to conduct operational maneuver by ground and air, and combining both modes when feasible. Incorporating advanced capabilities will enable mission-tailored division AGTFs to be smaller yet more effective than legacy divisions.

⁶ **Operational Strategic Commands** are the primary Army formation during peacetime and combat operations. In peacetime, an OSC is a standing headquarters that plans for and trains combat forces to specific strategic campaign plans. In wartime, the OSC executes its operational plan with forces allocated to it by the campaign plan. While OSCs are roughly comparable to corps, they are better described as formations tailored for specific missions in specific environments.

⁷ **Marine Expeditionary Brigade** is larger than an MEU, employing more than 16,000 marines and sailors. It is a sustainable combined arms team capable of conducting forced entry into foreign soil and performing sustained operations without external support for a period of up to 60 days.

Two division AGTFs and an air cavalry assault brigade⁸ used a combination of vertical maneuver and ground assault against two Anfarian OSCs in Azerbaijan. An Iranian division, claiming to be a peacekeeping force, moved into Azerbaijan to support Anfarian forces. By D+30 coalition air forces, directed by the Special Forces coalition support teams, attrited the Iranian division to 70%. By D+60, the Anfarian OSCs were at 40%, and the US division AGTFs were at 85%. Because of political pressure and heavy casualties, the Iranian division withdrew.

China and Korea. Tensions heightened when two Chinese army groups began reinforcing the Korean border (Figure 8). China conducted cross-border raids, with special operation forces attempting to eradicate the northern Korean warlords. Later in the wargame, two additional Chinese army groups moved to the Korean border.

A US-corps AGTF and assigned units from several installations in the US were alerted, mobilized, and prepared for deployment to Korea to deter a Chinese invasion. Because the active division AGTFs were already committed, Army National Guard (NG) divisions were task-organized under a US-corps AGTF. In addition, a US carrier battle group, a USMC MEB and a USAF AEF conducted training in the Korean area while the NG mobilized.

Albania and Colombia. US forces provided limited support to NATO operations in Albania. US forces were also participating in a security assistance exercise in Colombia with the purpose of staving off a significant threat to the government of Colombia and neighboring Venezuela.

US Homeland. Over the yearlong scenario, several attacks occurred in the homeland.

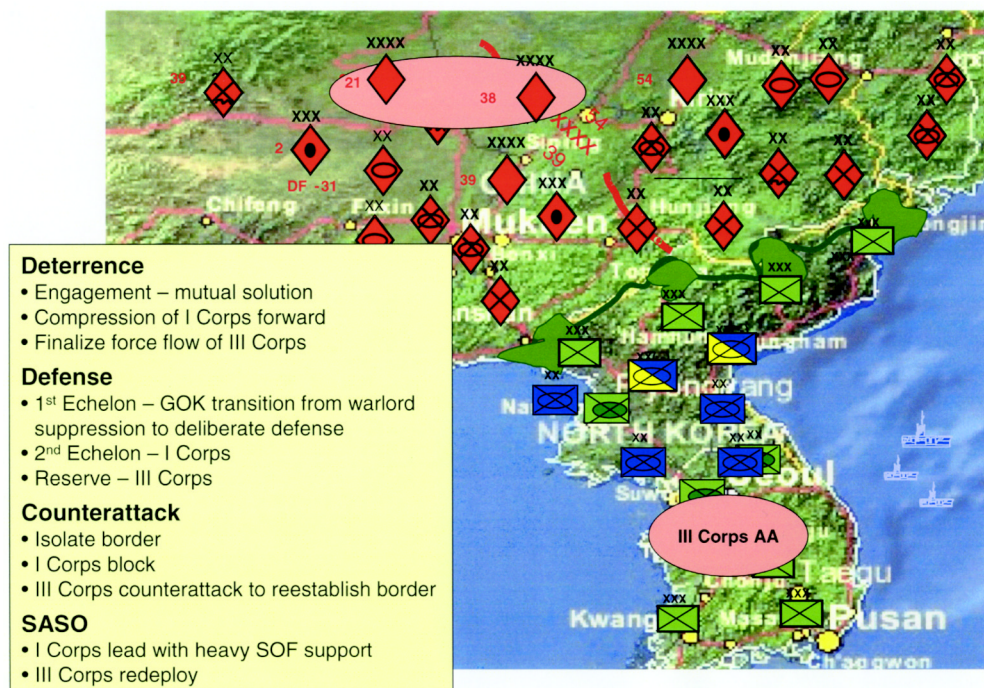


Figure 8. Combined Joint Task Force Korea CONPLAN
As of 2 January 2021

⁸ **Air Cavalry Assault Brigade** is the “air” portion of the AGTF. It provides the AGTF commander with a highly flexible maneuver force capable of performing a variety of missions across the entire

operations spectrum. An air cavalry assault brigade can rapidly maneuver to provide the decisive component of combat power throughout the noncontiguous battlefield during day, night, or adverse weather conditions.

Attacks included an explosion on the Washington Metro, radiation poisoning of dock workers in Bayonne, N.J., cyberattack and

bombing of a Federal Reserve Bank, bombing of a fuel distribution system, and a biological attack in Savannah, Ga.

Vigilant Warriors '02 Insights

During Vigilant Warriors '02, the GST grappled with numerous complex challenges in the context of multiple crises. These crises were transnational and occurred around the globe in a diverse mix of complex, varied settings. They involved a wide range of adaptive, thinking threats using asymmetric means to challenge US interests and capabilities. The operational environment demanded maximum utilization of strategically responsive, full-spectrum joint forces through a global force projection system. They had to examine the problem of allocating and prioritizing forces in time and place. The Objective Force was strategically responsive in a wide range of conflicts and provided the flexibility to deal quickly with sequential crises without lengthy redeployments (Figure 9). Finally, the GST had

to study increased demands on training and leadership brought out by Vigilant Warriors '02.

The Vigilant Warriors '02 scenario demonstrated the Objective Force's major contributions as an integral member of the joint, coalition, and interagency team in multiple, near-simultaneous global conflicts. The GST was presented with an array of challenges including attacks in the homeland, two potential major combat operations, multiple stability operations, support, and security cooperation operations. The wargame was successful in providing important insights and issues concerning The Army's capabilities in 21st century military operations.

Results from Vigilant Warriors '02 provide The Army with a process to examine, better understand, and operationalize emerging

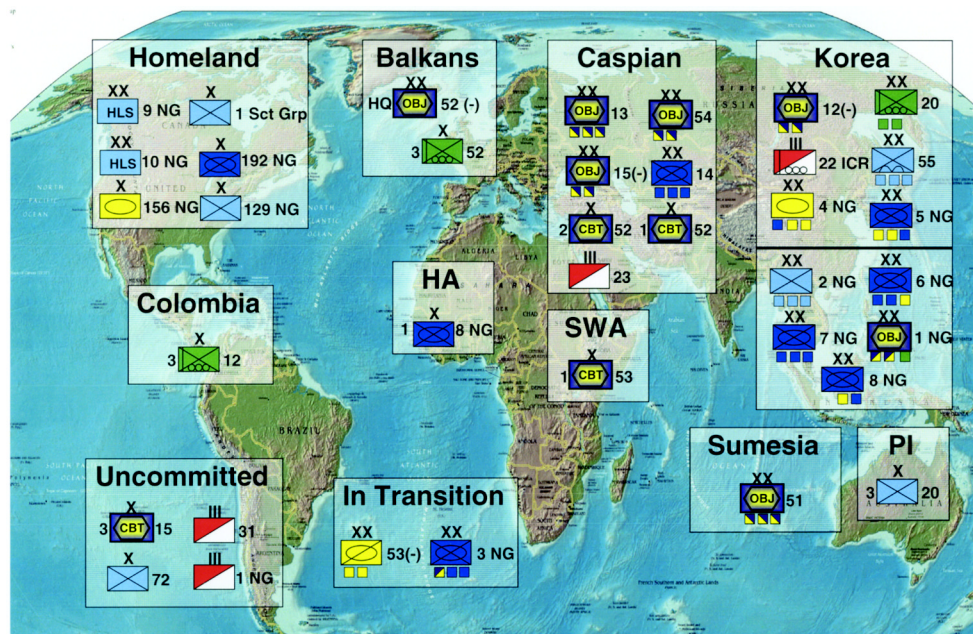


Figure 9. Army Force Disposition
End of the Game (January 2021)

requirements in the Defense Planning Guidance (DPG). Following is a summary of

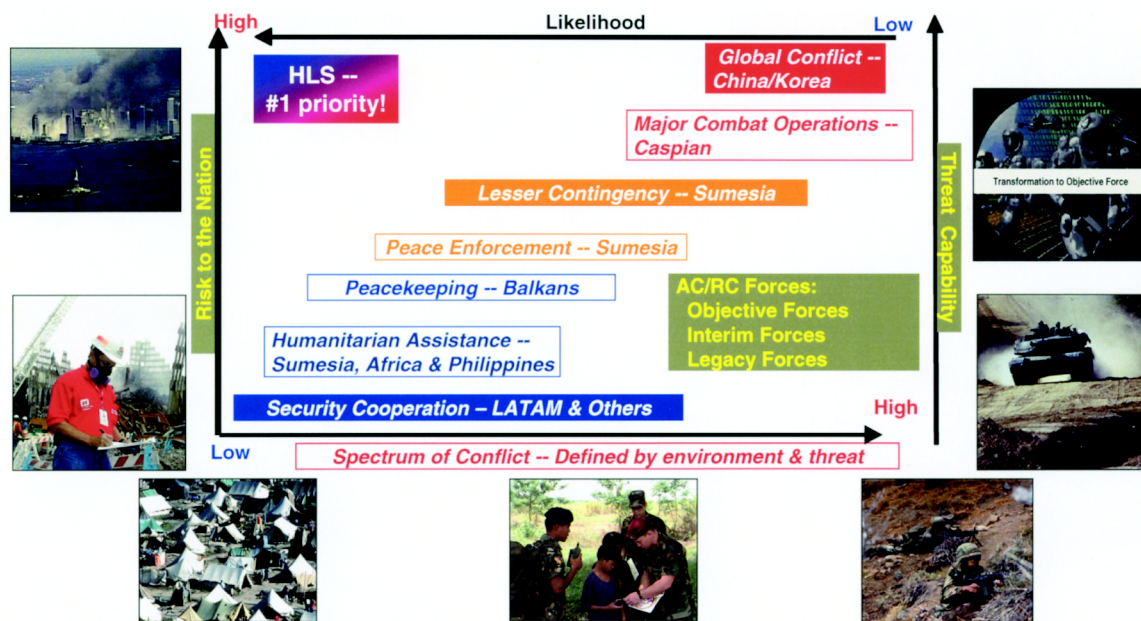
major insights and issues from this year's Army Transformation Wargame.

Full-Spectrum Operations

Vigilant Warriors '02 provided a full range of operational challenges along the operations spectrum (from security cooperation agreements, humanitarian assistance, disaster relief, peacekeeping, peacemaking to major combat operations) against a backdrop of a mix of adverse weather in complex and open terrain.

Vigilant Warriors '02 illustrated the cumulative demands placed on The Army and the joint team from multiple crises of varying size and scope. Achieving success in this environment requires an Army with the agility and versatility to deal simultaneously with multiple crises including threats against the homeland. The wargame demonstrated that high operational tempo and limited resources demand a transformed Army, with full-spectrum capabilities (Figure 10). Full-spectrum

capabilities are responsive and dominant at every point of the operations spectrum and provide options to joint and coalition force commanders. The Objective Force wins on the offense, initiates combat on its terms, gains and maintains the initiative, builds momentum quickly, and wins decisively. Eight of the 20 Army divisions played in Vigilant Warriors '02 were Objective Force AGTFs. These units were strategically responsive to wide-ranging conflicts in the homeland, Caspian, Sumesia,



Objective Force:

- Strategically responsive/dominant at every point of operations spectrum.
- Possesses campaigning qualities of durability, endurance & stamina.

Figure 10. Full-Spectrum Operations

Balkans, Latin America, and Korea. AGTFs enabled the GST to handle multiple crises quickly by allowing them to minimize risk. When Objective Force units were unavailable, risk increased and the time required to refocus and deploy forces increased. Mastering transition, campaigning qualities, simultaneous operations, and SOF capabilities as they relate to full-spectrum operations are discussed below.

- **Mastering Transition.** The Objective Force must be versatile and agile enough to rapidly transition from combat operations to post-hostility operations. This was evident in Sumesia where forces initially participated in humanitarian assistance operations, transitioned to UN peace enforcement operations, rapidly transitioned to combat operations, defeated the NIM, and then prepared to deploy to Korea.
- **Campaigning Qualities.** Campaigning qualities are the capabilities to sustain high-tempo operations, apply unrelenting pressure, and present multiple dilemmas to adversaries over vast geographical areas for extended duration. Campaigning qualities include effectively accomplishing multiple, complex tasks in a joint/
- multinational/interagency environment. The Objective Force's durability, endurance, and stamina make these campaigning qualities possible. The Caspian crisis specifically reinforced the essential requirement to maintain and improve the Army's campaign qualities. In fact, the entire global crises illuminated the critical requirement for Army campaigning qualities in crisis responsiveness.
- **SOF Capabilities.** The Objective Force will need SOF capabilities to conduct unconventional, civil affairs, and psychological operations. Regionally focused SOF conducting security cooperation activities strengthen US interests in vital strategic areas of influence. Acting as access enablers, they help shape the battlespace for contingency operations. They provide a forward presence with key indigenous personnel, as well as establish necessary military linkages to coalition forces. SOF provides human intelligence "eyes on target" countering the adversaries anti-access operations. They provide accurate timely intelligence and communications, enabling joint precision engagement of critical mobile targets.

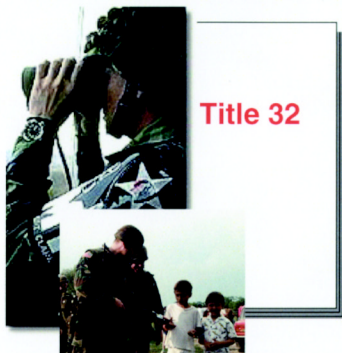
Homeland Security

Vigilant Warriors '02 reaffirmed the Army's non-negotiable contract with America — to fight and win our Nation's wars as part of the joint team. It also demonstrated that every unit should be capable of conducting major combat operations.

Vigilant Warrior '02 demonstrated that the Homeland Security (HLS) mission offers unique and challenging requirements across the force. HLS is more than reactive measures in the homeland — it must be proactive and world reaching. Within the context of a 21st century global series of crises, involving transnational groups with global reach,

campaign planning requires balancing strategic risks to meet homeland requirements with the demands of global military operations. As with other JSCP missions, the active and reserve joint force must be fully capable of meeting HLS responsibilities and worldwide operational requirements simultaneously (Figure 11).

State Consequence Management and Law Enforcement Missions



Title 32

Coast Guard Support



Title 14

Federal Augmentation of LFAs/ NORTHCOM Missions



Title 10

Figure 11. Homeland Security Command and Control

HLS requirements quickly challenged force allocations and presented tough decisions on committing forces and assessing risks. HLS demands competed for forces normally allocated to combatant commanders. As the GST made decisions, their concerns increased about allocating RC units to combatant commanders. Challenges/capability needs, intra-agency coordination, and readiness and training as they relate to HLS are discussed below.

- **Challenges/Capability Needs.** The Department of Defense (DOD) contributes to HLS through its military missions overseas, homeland defense, and support to civil authorities⁹. Ongoing military operations abroad have reduced the terrorist threat against the United States.

There are three circumstances under which DOD would be involved in improving security at home. In extraordinary circumstances involving hostile attacks against the homeland, DOD would conduct military missions such as combat air patrols or maritime defense operations. The Department would take the lead in defending the people and the territory of our country, supported by other agencies. Plans for such contingencies will continue to be coordinated, as appropriate, with the National Security Council, HLS Council, and other federal departments and agencies. Second, DOD would be involved during emergencies such as responding to an attack or to forest fires, floods, tornadoes, or other catastrophes. In these circumstances, the Department

⁹ National Strategy for Homeland Security, released by the President.

may be asked to act quickly to provide capabilities that other agencies do not have. Finally, DOD would also take part in “limited scope” missions where other agencies have the lead—for example, security at a special event like the recent Olympics. Successful HLS includes not only defense of US sovereign territory, but proactive actions abroad including security cooperation operations. DOD is the Nation’s lead agent for homeland defense¹⁰ (HLD). There is a clear need for Army forces to provide civil support¹¹ to civil authorities in law enforcement functions and other areas. The Posse Comitatus Act of 1878 restricts federalized forces from performing law enforcement functions except under extreme circumstances. Through training and exercises, military commanders can better understand the functions of various lead federal agencies and the coordination required when working with them. The HLS team recommended an exchange of liaison officers between NORTHCOM, lead federal agencies, regional allies (Canada and Mexico), and US territorial representatives to improve operational interconnectivity. Based on its civil support responsibilities, DOD should play an important part in helping develop the Federal Response Plan annexes.

- **Intra-agency Coordination.** DOD needs prioritized requirements from the civil community to facilitate planning and preparation for the military’s role in supporting non-DOD critical infrastructure protection. As the civil sector works toward improving its capabilities, it must identify the requirement gap DOD and the private

sector must fill. On-call contracts with industry can be established to cover functions such as transportation, medical, engineering, and security. The Army can provide unique capabilities, such as command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR), or weapons of mass destruction, and chemical, biological, radiological, nuclear, and high-yield explosives expertise.

- **Readiness.** Readiness across The Army remains critical to maintain an HLS edge especially since units routinely rotate from one end of the operations spectrum to the other without an extended train-up period. Many first responders, such as police, fire, and medical personnel, are also members of the RC. When called to active duty to support HLS or overseas missions, they affect a ripple on the economy and, in some cases, on the civil sector’s public safety workforce.
- **Training.** Training is needed to orient joint and Army leaders to HLS operational requirements, strategies, tactics, and policies. Interagency operations (including a thorough understanding of the Federal Response Plan), command and control, rules of engagement, and rules for the use of nonlethal force are some areas requiring special training. Keys to accelerated training include:
 - Utilizing distance learning better, thereby increasing readiness. Tailor distance learning to a specific HLS focus.
 - Increasing simulations as a means of increasing battalion-level proficiency.

¹⁰ **Homeland Defense** is the protection of US territory, sovereignty, domestic population, and critical infrastructure against external threats and aggression (Chairman, Joint Chiefs of Staff approved definition of HLD for use by the services).

¹¹ **Civil Support** is DOD support to US civil authorities for domestic emergencies and for designated law enforcement and other activities.

Strategic and Intratheater Lift

Advanced airlift and shallow-draft, high-speed ship (SDHSS) sealift capabilities provide versatility currently impossible to achieve. These advanced platforms afford the nation a strategic advantage by increasing operational options.

Vigilant Warriors '02 reconfirmed previous findings for advanced strategic and intratheater air and sealift assets (Figure 12). A versatile, global, force projection system able to deliver combat-capable units is essential for mitigating risks, reducing casualties, and swiftly and decisively defeating enemies. Key enablers, the Objective Force footprint, and how they relate to strategic and intratheater lift are discussed below.

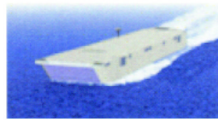
- **Key Enablers.** Advanced strategic and intratheater lift are key enablers for strategic responsiveness. Strategic and intratheater lift, combined with the right pre-positioned stocks, is vital in projecting and sustaining objective forces in an anti-access environment and enables Objective Forces to meet deployment metrics. Pre-positioned configured loads and critical sustainment packages reduce The Army's dependence on strategic lift. Pre-positioned stocks should be sized and

packaged into configured loads supporting modular Objective Force units.

- **Objective Force Footprint.** The more strategically responsive organization and smaller footprint of the Objective Forces were key features in rapid force closure. Closure rates of coherent force packages were key to swift and decisive victory. Objective Force division AGTFs were available for combat upon arrival. Objective Forces can go into action with enough sustainment to prevail in successive engagements without a pause, achieving operational momentum.
- **Lift.** Advanced airlift and SDHSS sealift capabilities reduced reliance on improved airfields and seaports while permitting multiple entry points within austere theaters. In the Caspian they accelerated force flow, degraded the enemy's anti-access strategy, and permitted employing the Objective Force with greater speed. Of

Wargame underpins metrics and demonstrated:

Shallow Draft High Speed Ship



55 KT
3 ships deliver Interim
Brigade Combat Team intact

Advanced Theater Transport



Super Short Takeoff and Landing
2 Future combat systems
3K nautical miles
750-foot runway

Theater Support Vessel



12 Theater Support Vessel sorties
deliver Interim Brigade combat
Team intact 400 nautical miles

Joint Transport Rotorcraft



Vertical takeoff and Landing
1 Future Combat System
500 km Radius

- **With required lift assets:**
 - shortened duration
 - risks and casualties reduced
- **Smaller footprint - - rapid closure**
- **Future air/sealift capabilities:**
 - deliver intact combat power
 - avoid traditional entry points

Figure 12. Strategic and Intratheater Lift

all lift assets examined, SDHSS provided the most significant impact on unimpeded access. Intratheater transport SDHSS sealift provided an important resource. Future force projection requires delivering combat power from ship to shore in locations without fixed facilities. SDHSS

sealift is the only strategic platform programmed capable of delivering troops and equipment together in sufficient quantity to provide immediate combat power, without dependence on fixed facilities.

Operational Maneuver

Exploiting the vertical dimension, the commander optimized simultaneous, noncontiguous offensive operations throughout the battlespace.

Objective Forces can conduct operations of depth and simultaneity throughout the noncontiguous battlespace by exploiting the vertical dimension of the joint transport rotorcraft (JTR), vertical airlifter, and the advanced theater transport (ATT) super-short takeoff-and-landing (SSTOL) airlifter (Figure 13). The wargame reinforced the effectiveness of operational maneuver from strategic distances and simultaneous

employment of combat-ready units upon arrival. Simultaneous use of strategic and intratheater lift enabled Objective Forces to conduct operational maneuver from strategic distances and bypass large, fixed terminals and ports. This enabled an uninterrupted deployment and immediate employment of combat-ready ground forces while building momentum and maintaining the initiative. The swift and decisive actions demonstrated in the

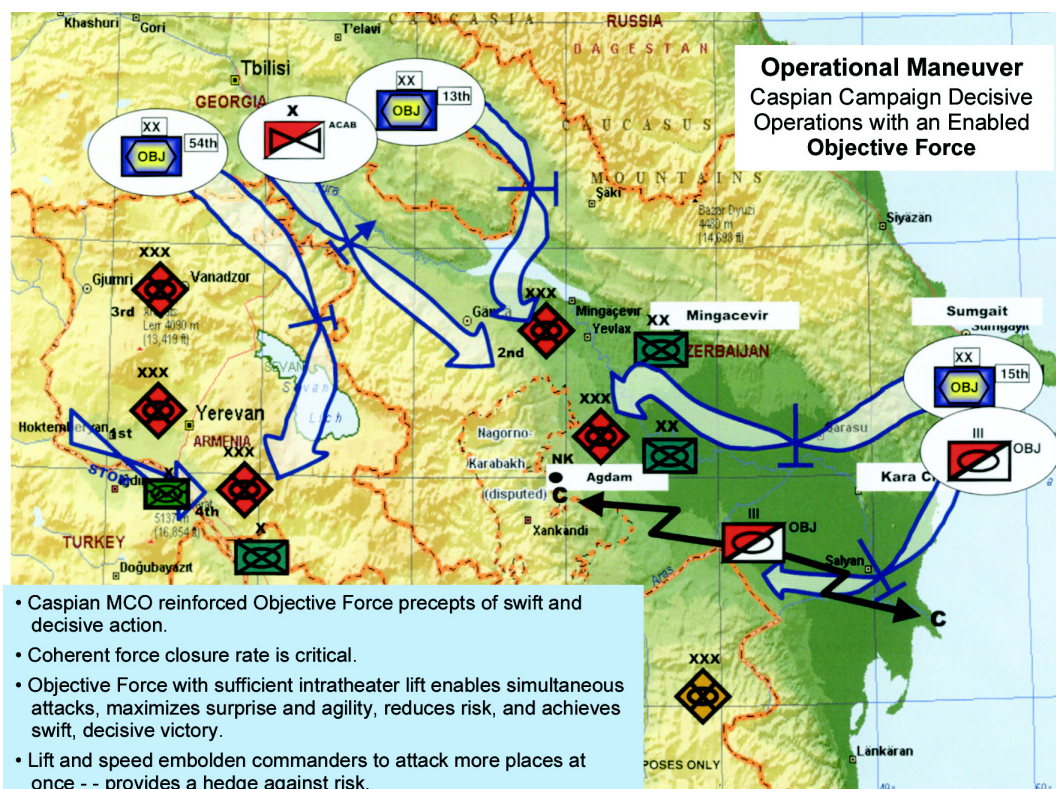


Figure 13. Operational Maneuver

game highlighted the need for coherent closure and simultaneous operations. Sufficient lift for simultaneous operations, embolden commanders, countering anti-access efforts and how they relate to strategic and intratheater lift are discussed below:

- **Swift and Decisive Action Precepts Reinforced.** In the Caspian region, effectively using strategic and intratheater lift enabled Objective Forces to conduct operational maneuver from strategic distances. Rapid closure of combat-ready ground forces with three days of organic sustainment allowed Objective Forces to fight upon arrival. Despite the access-denial campaign, the immediate employment of combat-ready ground forces caused Anfar to go to ground, denying options for Anfarian commanders in Azerbaijan and Georgia.
- **Coherent Closure.** Using vertical maneuver and intratheater airlifters enabled Objective Forces to bypass major ports mitigating Anfarian anti-access capabilities. The JTR vertical airlifter and the ATT SSTOL airlifter allowed portions of the AGTF to bypass the large ports in Baku and permitted an uninterrupted buildup of combat power.
- **Simultaneous Operations.** In the Caspian, Objective Forces demonstrated the value of effective near-simultaneous operations directed at enemy centers of gravity and decisive points. Following decisive operations, these forces demonstrated they could rapidly transition to stability and support operations.
- **Sufficient Lift for Simultaneous Operations.** Using sufficient JTRs and ATTs enabled simultaneous attacks by all three Objective Force division AGTFs from multiple directions. The Objective Force conducted dominant maneuver synchronized with joint and coalition precision engagements. Game results

suggested that with an all Objective Force and increased intratheater lift, Blue forces could have attacked multiple places simultaneously, thereby maximizing surprise and agility, reducing risk, and achieving decisive victory sooner. If Blue forces had conducted the operation without Legacy Forces (using only the 54th, 13th, and 15th AGTF plus an Objective Force armored cavalry regiment), they could have conducted simultaneous dispersed operations and could have destroyed enemy forces far quicker, with fewer resources and casualties. Participants looked at three excursions involving different combinations of Objective Force capabilities and enablers in comparison to a Legacy Force baseline campaign of 120-150 days. The desired end state in the Caspian region was to: Destroy the Anfarian offensive capabilities (which were modernized corps/national C2 facilities) through air-ground decisive operations; expel Anfar/ Iranian forces and restore Azerbaijan territorial integrity; and return the Azerbaijan government to pre-December 2019 conditions.

- Using an Objective and Legacy Force mix, and given 127 JTRs and 64 ATTs, the mission was completed in 86 days.
- As an alternative participants considered using just Objective Forces and the ability to lift one battalion at a time (same number of JTRs ATT), the mission could have been complete in 55 days.
- Given an all Objective Force and the ability to lift a brigade (544 JTRs and 82 ATTs), the mission could have been complete in only 41 days.

Results of these excursions hastened enemy defeat and reduced casualties. Excursions were run in the Integrated Gaming System simulation against a free maneuver threat using actual time-phased-force-deployment-data-level detail.

- **Embolden Commanders.** The commander was confident in joint force capabilities in terms of agility and responsiveness and was willing to accept more risk. Objective Forces enabled by intratheater airlifters emboldened the CJTF commander to conduct aggressive and simultaneous offensive operations.
- **Countering Anti-Access Efforts.** Futuristic air and sealift concepts proved essential to strategic and theater force projection and in countering anti-access

efforts. The SDHSS, theater support vessel, JTR, and ATT provided the versatility to avoid traditional entry points and delivered intact combat power along multiple routes to the operational and tactical fights. Objective Forces' ability to employ upon arrival nearly eliminates the RSOI process, thus allowing the GST to meet the demanding scenario. Without these capabilities, the GST could not have met scenario demands to move forces quickly from one crisis area to another.

Strategic Reserve and Mobilization

Vigilant Warriors '02 clearly enabled us to expand the "strategic reserves" description beyond military forces. The global series of crises demanded the nation husband critical supplies and capabilities. The game indicated selected amounts of critical munitions and key commodities, such as tungsten ore, TNT, bandwidth, and C4ISR assets, should be held in reserve as a hedge against risk.

Vigilant Warriors '02 started with the primary purpose of the strategic reserves to provide forces capable of ensuring success when operational demands exceeded Active Component (AC) resources (Figure 14). The

game also indicated that problems associated with Reserve Component (RC) mobilization today would still exist in 2020 unless mobilization and call-up rules changed.

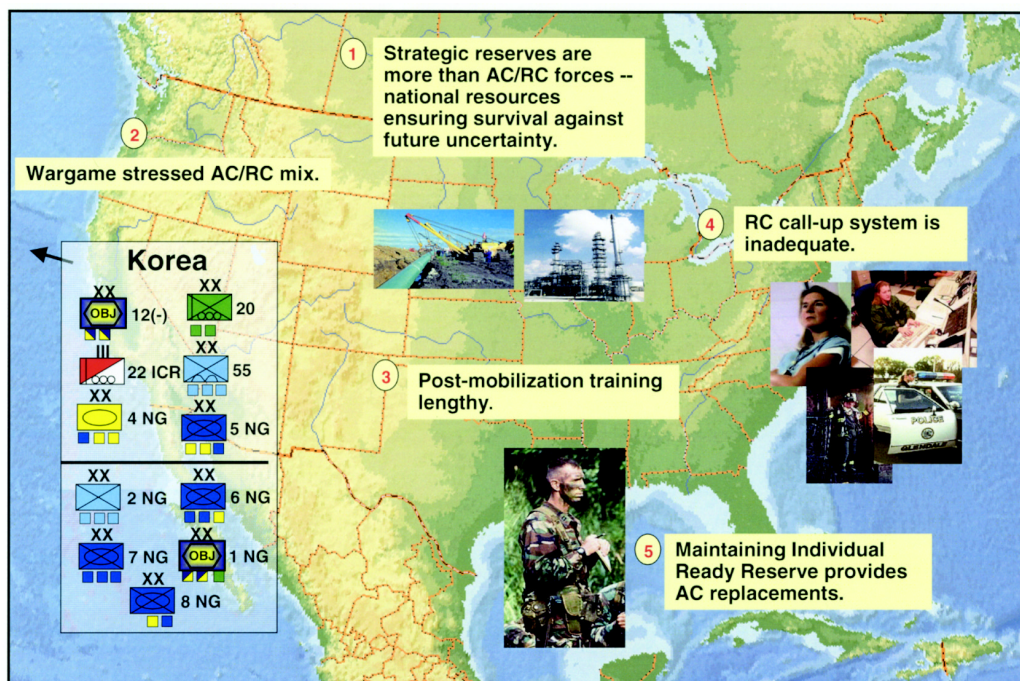


Figure 14. Strategic Reserve and Mobilization

- **Strategic Reserves.** Vigilant Warriors '02 used the following explanation of a strategic reserve as a point of departure: "Those military forces specifically identified to mitigate strategic risk and provide additional flexibility to the nation." The primary purpose of the strategic reserve is to provide the nation with forces capable of ensuring success in major combat operations proving more demanding or prolonged than anticipated. The strategic reserve can be employed at the discretion of the national leadership in a secondary role of back-filling forces committed to current operations. By performing nonspecialized tasks, strategic reserves can also be used to augment specialized units committed to civil support. The wargame proposed the following high-demand, low-density categories: satellite communications, firefighters, linguists, psychological operations personnel, civil affairs specialists, military police, intelligence collection and analysis, explosive ordnance disposal, and chemical/biological detection.
- **High-Demand/Low-Density (HD/LD) Units:** Shortly after combat operations commence and as the theater matures, there will be increasing support requirements for the CJTF commander. These requirements will transcend service requirements and include key enablers for conflict termination as well as transition to peace enforcement operations. Examples include displaced persons, enemy prisoners of war, theater missile defense, civil affairs, military police, joint special operations, aviation brigades, theater support activities, theater missile defense, and coalition peace enforcement operations support. During any one time, the CJTF may have one portion of the area of operations involved with combat operations while another part of the area of operations is transitioning to conflict termination and stability and support operations due to the higher operational

tempo of the Objective Force. There will not be time to determine a course of action while all of this is on-going. Therefore, there must be a plan devised for conflict termination and stability and support operations before military operations commence.

The current 2002 Army force structure identifies the HD/LD units as:

- Biological detection companies.
- Patriot battalions.
- Technical escort units.
- Theater high-altitude air defense batteries.
- C4ISR Assets.
- Petroleum, oil, and lubricants supply companies.
- Port opening team/detachments.
- Force provider.
- Linguists.
- Chemical reconnaissance/decontamination companies.
- Supply companies.
- Special Forces.

Vigilant Warriors '02 participants suggested that the following types of capabilities may still be HD/LD assets in 2020, unless force structure is adjusted.

- Satellite communications.
- Firefighters.
- Linguists.
- Psychological operations.
- Civil affairs.
- Military police.
- Intelligence collection analysts.
- Explosive ordnance disposal.
- Chemical/biological detection.
- Information operations
- Cyberwar.

Clearly, the Army must address the problem of HD/LD units between now and 2020.

- **Post-Mobilization Training.** Problems associated with RC mobilization today will still exist in 2020 if significant changes are not made. A contributing factor is the percentage of legacy units in the active

and reserve force. With forces deployed in the Caspian, Sumesia, and elsewhere, it would have been near impossible to meet reasonable mobilization and deployment timelines in response to a second major combat operation in Korea. A possible solution is allotting RC units more training opportunities at the combat training centers, thereby increasing the units' level of readiness and reducing post-mobilization training time. Another possible solution is integrating company-size units into AC brigade rotations.

- **RC Call-up.** Crises demands pointed to relooking the national policy for RC call-up. The current system is largely geared toward supporting the "two major theater wars" force-sizing formula. With the recent DPG's "1-4-2-1" force-sizing formula and the emerging National Military Strategy (NMS), national leadership may modify the call-up policy. Modification is needed to deploy a better AC/RC integrated force in response to simultaneously occurring crises.
- **Ready Reserve.** Multiple, near-simultaneous contingency operations of extended duration might overwhelm the current individual replacement system for soldiers stationed overseas. A growing consensus emerged towards increasing unit

rotations (began with Implementation Force/ Stability Force rotations in Bosnia). The individual ready reserve will remain in order to provide a source of low-density specialty replacements.

- **First Responders.** Mobilizing the RC might negatively affect civil authorities in responding to incidents. First responders—police, firefighters, and paramedics—the first to respond to a crisis, are often the same people belonging to the RC. Mobilizing the RC for HLS could also adversely affect the combat support and combat service support requirements of a major combat operation.
- **Nonmilitary Solutions.** Investigating the possibility of nonmilitary solutions to accomplish some combat support and combat service support functions may provide relief to military units. Clearly, a goal is the rapid transition from the military to civilian capabilities. Logistics civil augmentation programs can be established by examining the critical support infrastructure and identifying tasks industry can accomplish, then seeking industry assistance. Another possibility is developing off-the-shelf campaign plans for civilian/contract logistics support for transportation, medical, engineers, etc.

Echelonment

Corps and division AGTFs are multifunctional headquarters elements with embedded joint staff elements and linkages, plus a standard base of subordinate communications, sustainment, and reconnaissance, intelligence, surveillance and target acquisition (RISTA). This small organic nucleus facilitates rapid deployment for immediate response to contingencies. AGTFs are tailorable to meet mission requirements in a rapid and changing environment. Taking advantage of the modular design, they can be formed with embedded joint and Army forces (ARFOR) capability to facilitate predicted mission requirements.

As US forces deployed to the fight in the Caspian, the priority of lift and movement went to operational level (today - corps and divisions) combat and sustainment forces.

During entry operations, the corps AGTF assumed not only the warfighting responsibilities for the theater, but responsibility for many Army service

component command (ASCC) tasks. Assuming ASCC responsibilities caused the AGTF to focus in two competing directions — warfighting and performing Title 10 responsibilities.

- **Two Levels of UE Required.** ASCC-like functions will remain a requirement under all echelonment options to provide theater infrastructure for joint and Objective Force operations and to provide common user logistics and Army support to other services (ASOS). Two levels of unit of employment¹² (corps and division AGTFs) were required for the Caspian major combat operation, indicating that corps and division AGTF echelon frameworks are fundamentally sound (Figure 15).

Tailorable, modular units capable of immediately task organizing are the idea for the future. The need for two echelons is driven by the number and complexity of tasks, span of control, and span of command that a distributed, noncontiguous battlespace requires with an unpredictable, uncertain operating environment. Corps and division AGTFs are multifunctional headquarters elements with embedded joint staff elements and linkages and a standard base of subordinate communications, sustainment, and RISTA organizations. Both AGTF elements can serve as the centerpiece for a Joint Task Force (JTF), Joint Force Land Component Command (JFLCC), or ARFOR component. Joint and coalition

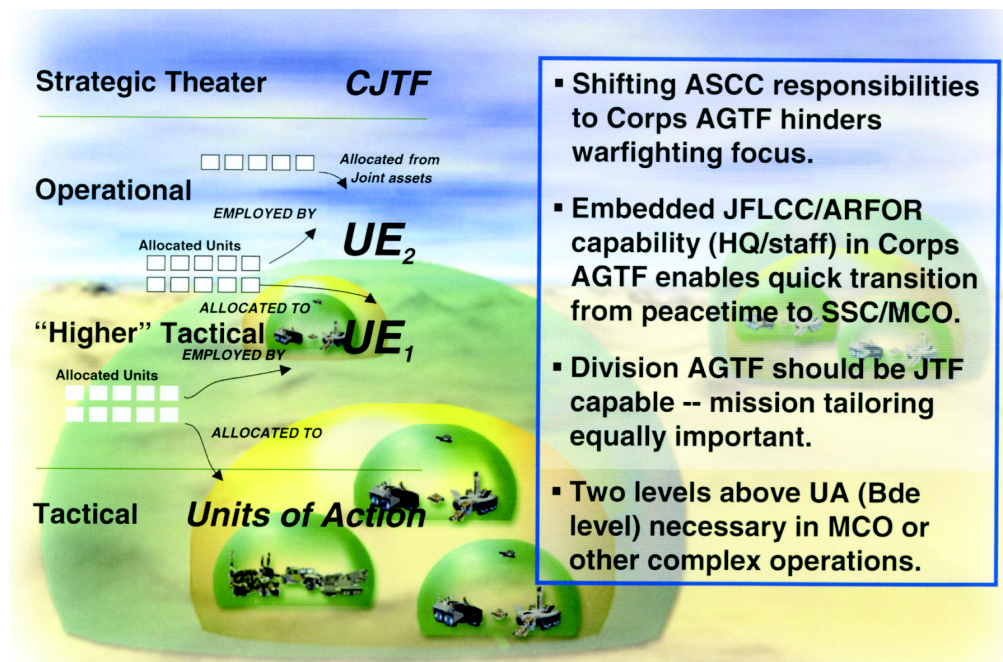


Figure 15. Echelonment

¹² **Units of Employment** are highly tailorable, higher-level echelons that integrate and synchronize Army forces for full-spectrum operations at the higher tactical and operational levels of war/conflict. Focused on major operations and decisive land campaigns in support of joint operational and strategic objectives, UEs participate in all phases of joint operations from initial entry to conflict termination in any form of conflict and operating environment. UEs are capable of command and control of all Army, joint, and multinational forces. It will be organized, designed, and equipped to fulfill command and control functions as the ARFOR component, JFLCC, or the JTF. The UEs will also have the inherent capacity to interact effectively with multinational forces as well as

with interagency, nongovernmental organizations, and private volunteer organizations. In historical terms, UEs represent the field army, corps, and divisions. Units of Action (UA) are largely fixed organizations that accomplish discrete sets of functions at the tactical level in accordance with prescribed mission-essential tasks. **Units of Action** are further designed as modular organizations that can be combined and integrated as the basic building blocks of combined arms combat power to form larger formations. Represented today by the echelons of section through brigade, UAs will vary in size and number of organic sub-units, dependent on the battlefield functions performed by the unit and its organic capabilities.

compatible C4ISR structures will be required to fulfill the roles of CJTF and Combined Joint Force Land Component Command (CJFLCC) headquarters. Because adversaries are adaptive, and the pace and transition of conflict is rapid, AGTFs are tailorable to meet mission requirements in a rapid and changing environment.

- **Corps AGTF.** The corps AGTF must be structured to meet The Army deployment goal of having a division AGTF in theater in 120 hours and closing four more division AGTFs within 30 days. In order to meet this goal, the corps AGTF must focus its efforts. The corps AGTF in the Caspian split its effort between conducting operational maneuver from strategic distances as they attempted to defeat enemy anti-access capabilities and providing common user logistics and ASOS to joint and coalition forces. Performing these Title 10 responsibilities was a hindrance in meeting deployment goals. Supporting joint RSOI, noncombatant evacuation, and enemy prisoners of war operations remained a warfighting distracter until ASCC units arrived.

- **Division AGTF.** The division AGTF employed in Sumesia was a CJTF-capable force. Because of mission complexity, and the joint and coalition interoperability requirements, it became apparent these capabilities are not just desirable but are necessary. The game demonstrated that a rapidly deployed division AGTF strengthens the joint force commander's abilities to deter conflict outright, limit its escalation, or preclude early enemy success, while simultaneously providing immediately available combat power. The division AGTF's inherent flexible deterrent options strengthens deterrence and postures the force for rapid transition to combat, if deterrence fails. The AGTF's embedded C4ISR complements joint force assets during entry operations. Deep precision and area fires of the division AGTF complement joint counterprecision and counter anti-access capabilities. The division AGTF provides the joint force commander with the option of deploying ground forces into objective areas. The AGTF's UA elements may be used to deny enemy initial objectives, occupy or protect key terrain and facilities, or assume positions to deny or threaten enemy aggression.

Readiness Training and Leader Development

For the Objective Force concept to work effectively, personnel need to be stabilized in units for at least three years.

Army leaders will require the knowledge, skills, and abilities to function effectively at any point on the operations spectrum. Current mobilization and training processes and personnel rotation policies are inadequate to meet future operational demands. The complexity and pace of future operations require well-trained, stable, and cohesive units (Figure 16). Several units deployed directly from one conflict to the next, we believe, will be commonplace by 2020.

- **Personnel and Unit Stabilization.** To increase stability and cohesiveness, it may be beneficial for units, rather than individuals to rotate or personnel to remain with units longer. The resulting increase in unit integrity and stability could be a significant factor in increasing leader confidence in unit capabilities and unit confidence in leaders. The focus on unit rather than individual training is another approach to stability, reducing unit

disruption and increasing unit cohesion and readiness.

- **Cohesive Units Achieve Battlefield Leverage.** Discussions during Vigilant Warriors '02 reinforced a belief among participants that cohesive units have greater battlefield leverage. Small units operating at tactical levels with strategic implications on a distributed, noncontiguous battlespace increasingly rely on relationships established in peacetime. As Objective Forces are fielded, keeping a unit together for years and requiring soldiers to train as a unit will eliminate problems associated with technology differences between Objective Force and transforming units.
- **Consider Special Operations Forces Model.** A recommended approach to readiness, training, and leader development for the Objective Force is to

follow the current special operations training model. This approach facilitates adapting to the demands of the 21st century. To provide adaptive, flexible, self-aware, and tactically and technically proficient soldiers, training must be a career-long requirement. Likewise, leaders must be trained in joint, interagency, and international operational processes. Training must prepare leaders at all levels to make rapid assessments and decisions in a chaotic environment.

- **Decrease Post-Mobilization Training.** The Army NG possesses some of the nation's finest trained small units. Current mobilization and training processes and personnel rotation policies are inadequate to meet future operational demands. Post-mobilization training caused extensive delays for some RC units. Requirements to conduct collective training at high levels

- Personnel & Unit Stabilization.
- Cohesive units achieve battlefield leverage.
- Major installations maintain a mix of units.

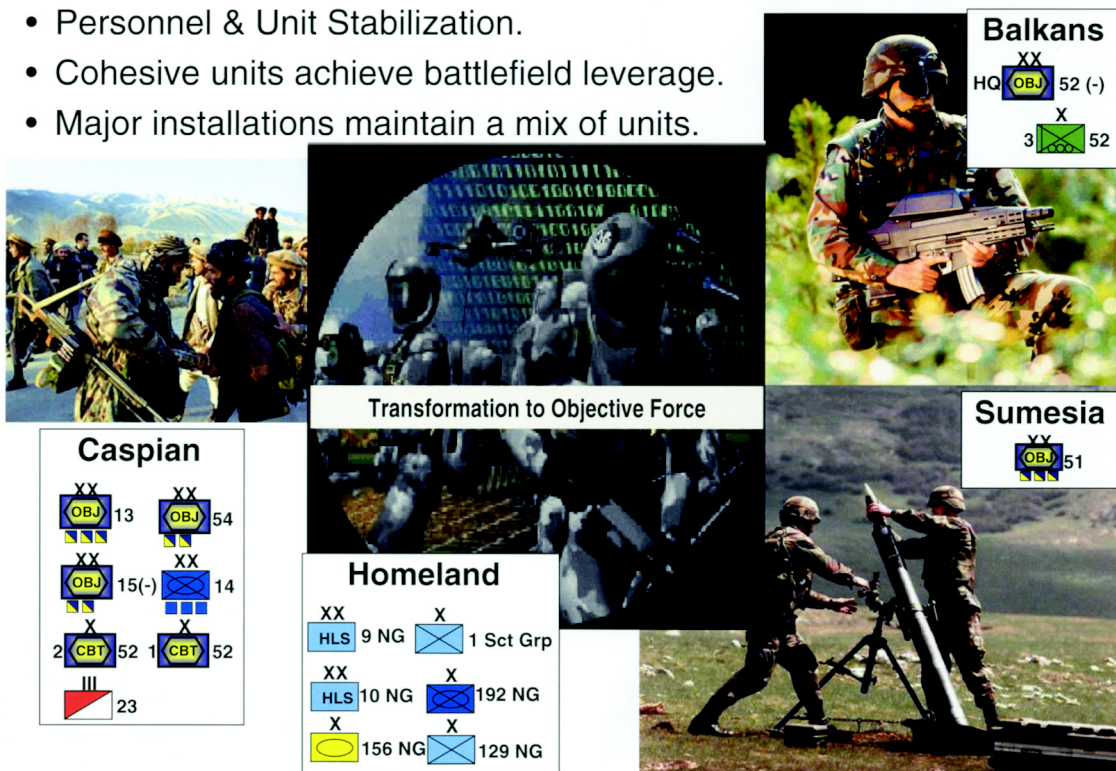


Figure 16. Readiness, Training and Leader Development

slowed the corps AGTF's deployment to Korea. Efforts to raise the readiness level of RC units before mobilization and to establish additional warfighting centers for post-mobilization training could shorten the time required to deploy RC units.

- **Maintain Small, Trained RC Units.**
Company level is the appropriate focus for maintaining C1 or C2 deployment readiness levels in the RC for the combat

arms. Establishing well-trained and maintained combat arms companies, capable of integrating into larger AC units on short notice, would increase readiness and reduce deployment times. Reducing individual soldier replacements by sending entire unit replacements significantly increases stability and cohesion within RC units.

Global Sustainment

Vigilant Warriors '02 clearly identified the direct linkage between raw material sources, production capacity, and the employment and sustainment of combat systems.

The heavy demands the Objective Force places on precision munitions early in major combat operations can quickly deplete stockage to dangerously low levels. This is in large part due to the impact of real time situational awareness through the common

relevant operating picture and the resulting increase in targets of opportunity seen by non line of sight and beyond line of sight platforms. The wargame highlighted the need to overcome the munitions industry's limited surge capacity (Figure 17) and underlined the



Figure 17. Global Sustainment

importance of strategic raw materials in relationship to production requirements. Levels of reserve stocks directly impact production rates of critical products. Intense combat consumed and nearly depleted strategic reserves of critical raw materials. Currently maintained types and quantities need updating to better reflect future requirements. The Objective Force operational concept maximizes distribution-based logistics. Pre-positioning sustainment assets reduces strategic air and sealift for sustainment, thereby enhancing strategic responsiveness and agility.

- **Precision Munitions.** The Objective Force places heavy demands on precision munitions early in a major combat operation. This high demand can quickly bring available precision munitions, which are produced in low volume, to dangerously low levels. The industry has limited surge capacity and requires lengthy lead time to expand production. Objective Forces rapidly deploying and fighting a high-intensity conflict in a short period of time reduces available time for expanding production. One way to mitigate this problem is by maintaining a minimal "warm-base" production capacity during long intervals of peace. This method could keep production lines open and make facilities available for quickly expanding production requirements. Increasing munitions stockpiles not only maintains the production base, but it allows sufficient time to expand production in the event of a major combat operation. Other possibilities include the government purchase of additional manufacturing capabilities, e.g., ammunition arsenals, or directly funding arsenal and factory overheads.
- **Strategic Raw Materials.** Vigilant Warriors '02 underlined the importance of strategic raw materials and their availability in relationship to production requirements. The primary sources for

some raw materials required for military goods are countries which may become potential adversaries. The wargame identified that although the United States maintains strategic raw material reserves, the types and quantities of material currently maintained is in need of updating to reflect modern and future requirements. Levels at which reserve stocks are maintained and replenished directly impact on production rates of critical products. With the intense combat operations experienced during Vigilant Warriors '02, the nation will consume and potentially deplete its strategic reserve stocks of raw materials. Stockage-level decisions ultimately come down to a trade-off between maintaining a robust industrial production base (and associated cost) and accepted levels of strategic risk inherent to a lesser production capability.

- **Distribution-Based Logistics.** The Objective Force operational concept requires new sustainment capabilities, maximizing distribution-based logistics and enhancing strategic responsiveness.
- **Army Pre-positioned Stocks Strategy.** The distribution-based logistics concept increases combat systems strategic mobility. It drives a change from the current practice of force-oriented Army pre-positioned stocks to a sustainment-oriented Army pre-positioned stocks strategy. Pre-positioning sustainment assets reduces the demands on strategic air and sealift for sustainment, thereby enhancing strategic responsiveness and agility. Effective distribution-based logistics provides strategic and operational sustainment mobility, mitigates the strategic impact of maximum on-ground airframe constraints, and significantly reduces the time required for maneuver force closure. This strategy has important implications on an expanded understanding of the strategic reserve including sustainment capabilities.

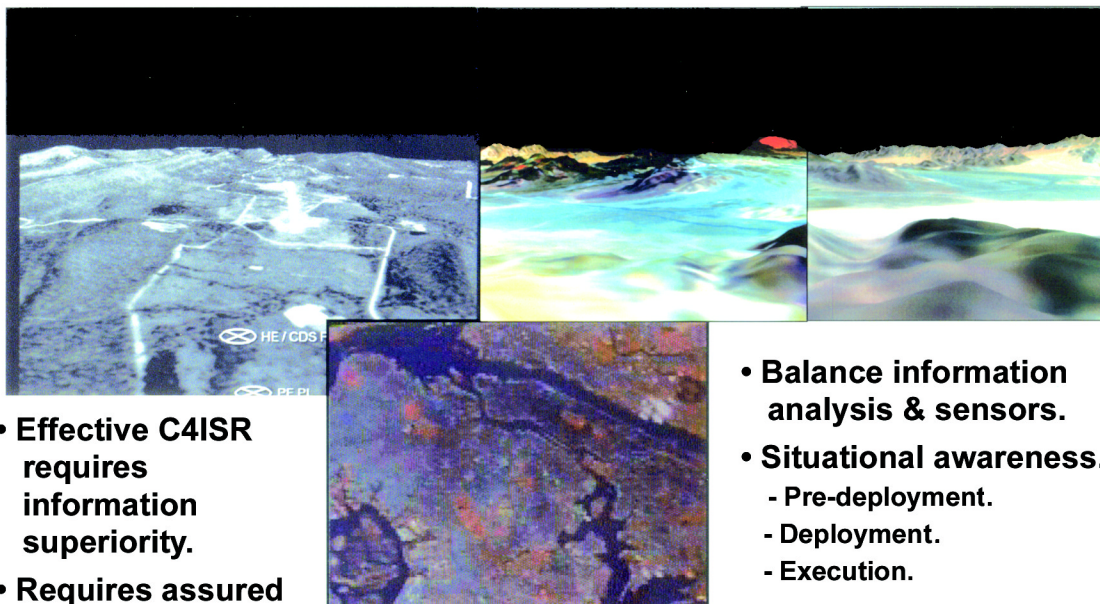
Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance

Various mutual interests linked the global threats depicted in the wargame. It became apparent that reacting to multiple crises simultaneously has a cumulative effect on our ability to adequately respond in a timely manner.

C4ISR is the combatant commander's most critical asset and the key to the Objective Force concept of "see first, understand first, act first, and finish decisively." The game underscored the need for a global campaign plan to meet the demands of worldwide crises. Unity of effort is required to establish effective command and control of global operations (Figure 18). Information superiority, a critical enabler of Objective Force operations, is contingent on maintaining access to assured communications and providing relevant information to all users simultaneously.

- **Strategic Planning Challenges.** A key game objective was to examine the command and control and leadership campaign planning challenges in the context of a series of global crises. A major implication of Vigilant Warriors '02 is that effective command and control of operations spanning the globe requires unity of effort on a global scale. The game underscored the need for not only regional campaign plans to deal with the theater crisis, but a global strategic plan to meet the demands of the series of worldwide

- **Global multiple-simultaneous conflicts create campaign planning & C4ISR challenges.**



- **Effective C4ISR requires information superiority.**
- **Requires assured communications.**

- **Balance information analysis & sensors.**
- **Situational awareness.**
 - Pre-deployment.
 - Deployment.
 - Execution.

Figure 18. Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance

crises presented. The multiple crises presented around the globe had the cumulative effect of a near-peer threat and required the GST decision makers to prepare, mobilize, and allocate forces to deter and resolve crises. As the scenario played out, division force requirements quickly exceeded active combat forces, which required mobilizing the RC. By the end of the wargame, the GST had committed the use of all but one Army division (remaining in the strategic reserve) of the 20 AC and RC divisions. Commitment of these forces was tied to the required extension of several troop deployments and increased demands for HD/LD capabilities. The greater portion of the three AC Marine divisions and one RC Marine division remained available.

- **Information Superiority and Assured Communications.** Vigilant Warriors '02 demonstrated that information superiority, a critical enabler of Objective Force operations, is contingent on maintaining access to assured communications. The critical need for an efficient automated information-fusion system to eliminate uncertainty and information overload, while demonstrating that human analysis remains a critical commodity, was reiterated. The game scenarios confirmed the need to provide relevant information to all users simultaneously.
- **Tailoring.** Tailoring sensor capabilities implies a degree of information filtering based on the specific needs of different users during different phases of an operation. The wargame highlighted the importance of tailoring sensor configurations to specific unit missions, tasks, and purposes, e.g., conducting a major combat operation in the Caspian region or conducting dismounted jungle operations in Sumesia.
- **Sensor Links.** Vigilant Warriors '02 confirmed what has been demonstrated in a number of previous wargames, i.e., sensor fusion must link all joint and coalition partners as well as link discrete operational bases separated by great distances.
- **Insurgency Environment.** Vigilant Warriors '02 marked the first time we examined the Objective Force in an insurgency environment. Insurgency challenges encountered in the Sumesian jungles magnified and complicated C4ISR. The complex jungle terrain limited intelligence, surveillance, and reconnaissance collection and slowed cross-country mobility, but validated the capabilities desired in the Objective Force to operate on diverse terrain and environments.
- **SOF.** During the wargame, Red commanders stated the most dangerous Blue sensor was the SOF soldier. They were able to report what they saw and assess what it meant. The Objective Force capitalizes on the linkage between these SOF sensors and the common relevant operating picture developed for the land commander.
- **Organic C4ISR.** Vigilant Warriors '02 again pointed out that corps and division AGTFs require the organic C4ISR capability to operate as a JTF, JFLCC, and ARFOR headquarters. This capability must meet each level of the command's specific requirements to perform varying and simultaneous missions, e.g., missions ranging from stability and support operations to major combat operations. C4ISR is one of the combatant commander's most critical elements to the Objective Force concept of "see first, understand first, act first, and finish decisively."

Conclusion and Way Ahead

Vigilant Warriors '02 broke new ground in examining a wide variety of critical issues affecting the development of the Objective Force in the context of 21st century conflict. The challenging operational environment defines such conflicts and therefore is the key driver for transformation to a capabilities-based Army. Reflective of this complex operational environment, threats in the wargame were adaptive, thinking and using all elements of national power.

Above all, the wargame reinforced The Army's basic requirement to transform to a strategically responsive force, which is dominant across the spectrum of military operations.

The wargame also illuminated the central idea that Army Transformation is more than evolution to the Objective Force. It is an all-encompassing process ensuring that The

Army, as an integrated member of the joint, coalition, and interagency team, is able to meet the HLS and global challenges described in the DPG and the emerging NMS.

Doing so in the context of joint transformation requires fundamental change in our developmental processes, in our educational institutions, and in our underlying culture and defense philosophies. Finally, the wargame confirmed that we must transform the way we leverage technology.

Vigilant Warriors '02 underscored many of our conceptual requirements for future Objective Force capabilities. More important, the wargame produced a significant number of implications on future doctrine, organization, training, materiel, leadership and education, personnel, and facilities (Figure 19). In effect, this inherent discovery process constitutes the



Figure 19. Implications for Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities

real value of the wargame to Army Transformation.

In many instances, Vigilant Warriors '02 identified issues and insights, which will require additional study and analysis in the coming months. In this respect, the wargame serves as a point of departure for future research and examination of important aspects of 21st century conflict. Key examples of these topics are:

- **Implications of HLS.** Clearly, the game demonstrated that HLS remains an important priority. Much work now needs to be done concerning the integration of the AC and RC. The wargame indicated several means of improving the Army's ability to respond to HLS challenges, which will require additional work. This entails issues relating to mobilization, post-mobilization training, and RC integration into the active force. Finally, we need to determine the most effective means of leveraging commercial capabilities for HLS.
- **Implications of Global Campaign Planning.** In view of the challenges presented in the wargame and requirements identified in the DPG, the need to conduct global campaign planning as opposed to regional planning requires further study. This is especially important in the areas of strategic command and control and sustainment.
- **Issues Relating to the Strategic Reserve and Industrial Base.** The wargame highlighted the competing demands of swiftly responding to crises across the spectrum of operations and the ability of the industrial base to sustain these operations. The wargame results indicate that we must reexamine our priorities for strategic resources as well as the composition of forces, capabilities, raw material, and other critical items (e.g.,

bandwidth) comprising the strategic reserve.

- **Joint Interdependence.** Our future study efforts must focus on joint interdependence, on progressing beyond interoperability to an interdependent force that functions with a unity of effort capitalizing on the strengths of the contributions of each of the services. This effort has important implications on the joint force's ability to operate in an interagency environment with coalition forces and nongovernment organizations.
- **Strategic and Intratheater Lift.** The wargame clearly demonstrated the value of strategic and intratheater lift in achieving rapid access and swift decision. The Caspian excursions warrant further study in light of strategic lift required in maximizing Objective Force capabilities.
- **Echelonment.** We must move forward in establishing the form and function of Army echelons at the strategic, operational, and tactical levels.
- **Unit Rotation vs. Individual Rotation.** Replacing the current practice of individual overseas rotations with one of unit rotations will result in increased unit integrity and stability. A unit rotation policy allows unit-focused training, increasing unit cohesion and readiness. Unit integrity and stability are significant factors in increasing leader confidence in unit capabilities and unit confidence in leaders.

Greater analytical rigor is required to better examine the strategic and joint/combined operational implications on the joint forces, other government agencies, our allies, and coalition partners as we prepare to meet the demands of an unpredictable 21st century. Vigilant Warriors '03 will meet this demanding challenge.